Program Policy <u>Fishery Products Treated with Carbon Monoxide and Filtered Smoke Gas</u>

In 1997, the USDC Seafood Inspection Program became aware of a process that employs a filtered wood smoke that at least one processing company, Hawaii International Seafoods, Inc., termed "tasteless smoke" (TS). The purpose of its application is to retard the development of the brown color that rapidly occurs in tuna flesh after it has been cut. Although carbon monoxide (CO) is a component of the "tasteless smoke", its concentration is similar to that found in normal wood smoke. Unlike some other processes that result in the color of the product being enhanced or brightened and fixed through the direct use of CO at significantly higher concentrations and/or longer exposure times, this process, when used with appropriate controls, reportedly does not enhance the natural flesh color of tuna, and the color of the flesh eventually degrades over time. There is no evidence to suggest that "tasteless smoke" poses a health risk to the consumer from the ingestion of treated product.

On September 3, 1998, Richard Cano signed a policy indicating that only seafood treated with "tasteless smoke" gas from verified facilities named in the policy would be permitted to be lot inspected and bear our mark once it arrived in the United States. The list of accepted facilities would be updated as necessary.

In May 1999, FDA issued Import Bulletin 16B-95 which included instructions that tuna treated with "tasteless smoke" or CO should be:

- labeled as processed foods that have been treated with CO or TS,
- not misrepresented as fresh frozen seafood by their label, and
- near normal in flesh color

As a result of Import Bulletin 16B-95, the USDC Seafood Inspection Program policy was expanded to include facilities treating products with carbon monoxide mixtures.

Hawaii International has provided data to support their view that "tasteless smoke" is GRAS by submitting a GRAS notification document to FDA's Office of Premarket Approval. On March 10, 2000 FDA has responded that the agency has no questions at this time regarding the conclusion of Hawaii International that tasteless smoke is GRAS for use on raw tuna, before it is frozen, to preserve its taste, aroma, texture, and color. The agency has not, however, made its own determination regarding the GRAS status of this use of tasteless smoke. The FDA response further reiterates that any firm who markets tuna that has been preserved with tasteless smoke is responsible for ensuring that such tuna is neither adulterated nor misbranded under sections 402 and 403 of the Federal Food, Drug, and Cosmetic Act.

USDC Seafood Inspection Program Policy

USDC has implemented a policy within its voluntary Seafood Inspection Program to lot inspect and certify tuna products treated with filtered wood smoke or carbon monoxide only if those products originate from firms that USDC has verified employ acceptable process controls. The products must also be in compliance with all other applicable legal and regulatory requirements.

Verification Protocol

The verification protocol encompasses several parameters. First, the firm's HACCP and sanitation operation are evaluated for compliance to FDA regulations, in particular 21CFR Part 123. Color readings are taken of a sampling of tuna steaks using a HunterLab color difference meter. Steaks are sampled with readings taken after the first cut, after exposure to the gas, and at thirty, ninety, and one hundred fifty-day intervals in frozen storage. After frozen storage, at each of the intervals, the steaks are thawed and stored chilled under conditions similar to that found in retail stores. Each day for the next five days, the steaks are analyzed for color readings and sensory indicators. All readings are charted and analyzed using HunterLab software. Photographs are taken at each stage of one steak that has been treated and a control.

Samples of the gas are also taken at the source and analyzed for various constituents, including carbon monoxide. Histamine analyses are also performed on representative product samples.

Audits of production facilities are performed twice per year.

Additional Activities

In an effort to determine criteria to objectively describe "near normal in flesh color", the USDC Seafood Inspection Program has collected color data at each facility. This data was used to develop a process/color specification that was evaluated with industry assistance since February. Additional tests occurred that evaluated the effect of filtered smoke and carbon monoxide on tuna at varied stages of deterioration. The conclusion of the studies will be published and the colormetric standard announced in the Federal Register in the near future.

Approved Facilities

Below are the facilities currently in compliance with this policy. This list supersedes the list of April 4, 2002 and will be replaced as new facilities are added or deleted. Unless indicated, all vacuum-packed product forms must be in the frozen state. The Program is aware that other fish species are being treated with the process, such as tilapia, swordfish, and mahi-mahi. It is planned that color data will be collected on these species as well. Until then, the Program will not hinder commerce by limiting the lot inspection to only tuna products from these facilities, as long as all other USFDA and USDC requirements are met. Questions should be directed to:

USDC Seafood Inspection Program 1315 East-West Highway, F/SI Silver Spring, Maryland 20910 Phone: 301-713-2355 FAX: 301-713-1081

E-Mail: <u>Kenneth.Aadsen@noaa.gov</u> E-Mail: <u>Steven.Wilson@noaa.gov</u>

Firms new to the list are indicated with a symbol.

Facilities Utilizing Carbon Monoxide Gas Mixtures

Pt. Balinusa Windumas

Jalan Ikan Tuna 2 Pelabuhan Benoa, Denpasar

Bali, Indonesia

Phone: 62361-722688 FAX: 62361-723636

E-Mail: balinusa@dps.centrin.net.id

Facilities Utilizing Filtered Wood Smoke

Angel Seafood Corporation

AFI International Trading Corporation

Tambler

General Santos City, Philippines

Phone: 632-838-4901 FAX: 632-838-4675 E-Mail: tonym@netasia.net

Citra Mina Seafood Market

004 Cabe Subdivision, Lagao Road

Tambler

General Santos Cit, Philippines

Phone: 6383-552-8136 FAX: 6383-552-2654

E-Mail: mgtr@gsc.webling.com

East Asia Fish Company, Inc.

EAFCI Building

Davao Fish Port Complex

Daliao Toril District Davao City, Philippines Phone: 6382-291-3397 FAX: 6382-291-3398

E-Mail: stjames@epic.net

FrigoLab "San Mateo"

Via San Mateo, Km 4 ½

Manta, Ecuador

Phone: 593-5-628701 FAX: 593-5-628688 Tambler

General Santos City, Philippines

Phone: 6383-553-8848 FAX: 6383-552-2794

E-Mail: <u>amerasia@mkt.weblinq.com</u>

CV. Lautan Niaga Jaya

Perum Prasarana Perikanan Samudra Jalan Muara Baru Ujung Blok B 168

Jakarta Utara - 14440

Phone: 6221-661-4154/661-7874/6669-1965

FAX: 6221-661-9641

E-Mail: lautanniaga@cbn.net.id

Evergreen Enterprises

#2 Tomas Claudio St. 7000 Zamboanga City

Philippines

Plant Location

Philippine Kingford, Inc.

Tambler

General Santos City, Philippines

Phone: 6383-380-7301 FAX: 6383-380-7333

E-Mail: kingford@pacific.net.ph

JACSS Seafood Venture

Dole Compound, Calumpang General Santos City, Philippines

Phone: FAX:

E-Mail: Samuel@gs-link.net

Mommy Gina Tuna Resources

004 Cabe Subdivision, Lagao Road

Tambler

General Santos City, Philippines

Phone: 6383-552-8136 FAX: 6383-552-2654

E-Mail: mgtr@gsc.webling.com

Philippine Cinmic Industrial Corp.

C/O 181 Roxas Boulevard, Baclaran 1700 Paranaque, Metro Manila

Philippines

Plant Location

Philippine Kingford, Inc.

Tambler

General Santos City, Philippines

Phone: 6383-380-7301 FAX: 6383-380-7333

E-Mail: kingford@pacific.net.ph

Phillips Seafood Indonesia

Sulawesi Plant Jalan Lemelleng #42 Bojo Baaru, Mallusetasi Barru, Sulawesi Selatan Pare Pare, Indonesia Phone: 62-421-21105

FAX: E-Mail:

Pt. Bonecom

JL Muara Baru Ujung, Blok L, No. 1 Jakarta Utara 14440, Indonesia

Phone: 6221-661-6686 FAX: 6221-662-6686

E-Mail: tjandra@bonecom.co.id

Pt. Fajar Cakrawala Sumbindo

Jalan Ikan Tuna III Pelabuhan Benoa Bali

Indonesia

Phone: 62361-721386 FAX: 62361-724009

E-Mail: sumbindo@indo.net.id

PescaRich Corporation

Espina Industrial Center, Labangal General Santos City, Philippines Phone: 949-830-5509 (USA) FAX: 949-830-5509 (USA)

E-Mail: rpjafriend@home.com

Philippine Kingford, Inc.

181 Roxas Boulevard, Baclaran 1700 Paranaque, Metro Manila

Philippines

Phone: 6383-380-7301 FAX: 6383-380-7333

E-Mail: kingford@pacific.net.ph

Phillips Seafood

2nd Floor Refrigeration Building

Fish Port Complex

Brgy. Tambler, General Santos City

Philippines 9500 Phone: 6383-302-5957 FAX: 6383-302-5958

E-Mail: phillips@gsc.webling.com

PT. Danaumatano Persada Raya

Jakarta Fishing Port Jalan Muara Baru Ujung Blok G/1-2

Jakarta Utara 14440

Indonesia Phone: FAX: E-Mail:

Pt. Hatindo Makmur

Kompleks Pelabuhan Benoa Jalan Ikan Tuna III No. 2 Benoa, Denpasar Bali, Indonesia 80223

Phone: 62361-724095 FAX: 62361-724097

Pt. Intimas Surya

Jalan Ikan Tuna Blok B2 Pelabuhan Benoa Bali, Indonesia

Phone: 62361-724246 FAX: 62361-721159 E-Mail: jorgih@indo.net.id

Pt. Lucky Samudra Pratama

Jalan Muara Baru Ujung Blok F No.1 Jakarta Utara, 14440

Indonesia

Phone: 6221-662-3275 FAX: 6221-662-3276 E-Mail: misai@cbn.net.id

Pt. Minasakti Kichitomindo

Komplex Pelabuhan Perikanan Samudera Jakarta

Jalan Dermaga Timur Kel. 2 No. 15 Penjaringan, Jakarta Utara 14440

Indonesia

Phone: 6221-669-6076 FAX: 6221-669-6056 E-Mail: minasakti@link.net.id

PT. Segarindo Mina Manunggal

Komplex Bandengan Megan Jalan Bandengan Utara Kav 81, Blok B, No 10 Jakarta 14440, Indonesia Phone: 6221-667-0505 FAX: 6221-662-5825 E-Mail: hartonot@indo.net.id

Sea Source Corporation

37 Annapolis Street Room 203 Greenhills, San Juan Metro Manila, Philippines 1505 Phone: 632-723-8799

Plant Location

Angel Seafood Corporation

Tambler

General Santos City, Philippines

Phone: 6383-553-8848 FAX: 6383-552-2794

E-Mail: amerasia@mkt.weblinq.com

Pt. Intisamudera Citra Perkasa

Jalan Ikan Tunaraya Blok No. 1 Pelabuhan Benoa, Denpasar Bali

Indonesia

Phone: 62361-724526 FAX: 62361-724527

E-Mail: shihchihhsing@kimo.com

Pt. Makmur Jaya Sejahtera

Jalan Ikan Tuna Blok B2 Pelabuhan Benoa Bali, Indonesia

Phone: 62361-724246 FAX: 62361-721159 E-Mail: jorgih@indo.net.id

PT. Satu Enam Delapan Benoa

Kompleks Pelabuhan Benoa Jalan Ikan Tuna III No. 1B Benoa, Denpasar

Bali, Indonesia 80223 Phone: 62361-724095 FAX: 62361-724097

Santa Cruz Seafoods, Inc.

Dole Compound, Calumpang General Santos City, Philippines Phone: 6383-553-5387/4102/4103

FAX: 6383-553-2194

E-Mail: stacruz@mozcom.com

Truc An Co., Ltd.

Lot A12-13

Suoi Dau Industrial Zone Dien Khanh District Khanh Hoa Province, Vietnam

Phone: 8458-743173 FAX: 8458-821175

E-Mail: truc-an@dng.vnn.vn